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ABSTRACT

The structure of a concept generally labeled "teacher efficacy" is examined. A sample of 342 prospective and experienced teachers was administered an efficacy questionnaire adapted from the research of S. Gibson and M. H. Dembo (1984). Factor analytic procedures with varimax rotation were used to generate a 2-factor solution that accounted for 32 percent of the variance in scale scores. Contrary to previous research, these factors corresponded not to a personal versus teaching efficacy distinction, but instead to a simpler internal versus external distinction, similar to locus of control measures of causal attribution. Implications of these findings to past and future research on the construct are discussed. Five tables present analysis results, mostly factor loadings. One figure illustrates the discussion. (Author/SLD)

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TEACHER EFFICACY: A STUDY OF CONSTRUCT DIMENSIONS

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Abstract

This study examined the structure of a construct generally labeled "teacher efficacy." A sample of 342 prospective and experienced teachers was administered an efficacy questionnaire adapted from the research of Gibson and Dembo (1984). Factor analytic procedures with varimax rotation were used to generate a two-factor solution that accounted for 32% of the variance in scale scores. Contrary to previous research, these factors corresponded *not* to a personal versus teaching efficacy distinction, but instead to a simpler internal versus external distinction, similar to locus-of-control measures of causal attribution. Implications of these findings to past and future research involving this construct are discussed.

Teacher Efficacy: A Study of Construct Dimensions

Over the past two decades growing numbers of educational researchers have identified teachers' perceived sense of efficacy in teaching and learning situations as a powerful variable in studies of instructional effectiveness. The Rand Corporation's "Change Agent Study," for example, found teacher efficacy to be the most powerful variable in predicting program implementation success (Berman & McLaughlin, 1977). Similarly, Brookover and Lezotte (1979) found through interviews with school personnel that those in more effective schools had a stronger sense of efficacy and tended to feel more responsible for the learning of their students than did those in less effective schools. Other studies conducted in diverse contexts have produced similar results (Armor et. al, 1976; Ashton, 1984; Brophy & Evertson, 1977; Guskey, 1988; Lee & Gallagher, 1986; Trentham, Silvern, & Brogdon, 1985).

Although modern definitions of efficacy vary, most can be traced to the early psychological research of Heider (1958) or White (1959). Woolfolk and Hoy (1990) note that the earliest citation to "teacher efficacy" in the Educational Resources Information Center (ERIC) system is a study by Barfield and Burlingame (1974), in which efficacy was defined as "a personality trait that enables one to deal effectively with the world" (p. 10). Rand researchers defined efficacy as "the extent to which the teacher believes he or she has the capacity to affect student performance" (McLaughlin & Marsh, 1978, p. 84). And more recently, Ashton (1985) defined it as "teachers' belief in their ability to have a positive effect on student learning" (p. 142). In general, efficacy is perceived as teachers' belief or conviction that they can influence how well students learn, even those who may be difficult or unmotivated.

Early measures of teacher efficacy tended to be rather crude and simplistic. In the Rand study, for example, efficacy scores were based on teachers' responses to only two items. Some of the earliest efficacy scales used items much like those developed by Rotter (1966) to assess locus-of-control (Murray & Staebler, 1974). Others were based on items similar to those employed in measures of students' ability to control reinforcements in learning situations (Crandall, Katkovsky, & Crandall, 1965; Duby, 1979). In recent years, however, several highly reliable efficacy scales have been developed based on specific theoretical models (Gibson & Dembo, 1984; Guskey, 1981, 1987; Rose & Medway, 1981).

Ashton and Webb (1982) were among the first researchers to develop a multidimensional model of teacher efficacy, based primarily on Bandura's cognitive social learning theory (Bandura 1977, 1978). According to Bandura, motivation is affected by both *outcome expectations* and *efficacy expectations*. Outcome expectations are the judgments an individual makes about the likely consequences of specific behaviors in a particular situation or context. Efficacy expectations, on the other hand, are an individual's beliefs about his or her own capability to achieve a certain level performance in that situation or context.

Although outcome and efficacy expectations are interrelated, Bandura believed they could be differentiated. Individuals may believe that certain behaviors will produce particular outcomes, but if they do not

believe they can perform the necessary actions, they will not initiate the relevant behaviors or, if they do, they will not persist in those behaviors. As Bandura (1986) notes, "the types of outcomes people anticipate depend largely on their judgments of how well they will perform in given situations" (p. 392). Furthermore, Bandura believed that efficacy expectations were derived from both perceptions of performance accomplishment and social persuasion, especially as it is reinforced by organizational activities and context conditions that promote individual success.

Extending Bandura's reasoning to teachers, Ashton and Webb (1982, 1986) suggested that a teacher's outcome expectations about the consequences of teaching in general are reflected in a dimension they labeled *teaching efficacy*. This is the dimension they believed to be measured by the first of the Rand items: "When it comes right down to it, a teacher really can't do much because most of a student's motivation and performance depends on his or her home environment" (Berman & McLaughlin, 1977, p. 137; McLaughlin & Marsh, 1978, p. 85). Efficacy expectations regarding an individual's personal ability to execute particular courses of actions to bring about desired results were referred to as *personal efficacy*. The second Rand item, "If I try really hard, I can get through to even the most difficult or unmotivated students" (Berman & McLaughlin, 1977, p. 137; McLaughlin & Marsh, 1978, p. 85), they believed tapped this dimension.

According to Ashton and Webb, these two dimensions can operate independently. Some teachers may believe, for example, that teaching is a potentially powerful factor in student learning, but that they lack the personal ability to affect their own students. At the same time, others may believe that teaching in general has little influence on students, but that they are exceptions to this rule.

Building on the work of Ashton and Webb (1982), Gibson and Dembo (1984) developed a questionnaire to measure these two dimensions of teacher efficacy. Their "Teacher Efficacy Scale" asks respondents to rate 30 statements on a 6-point Likert scale from "strongly agree" to "strongly disagree." Factor analysis of the responses of 208 elementary school teachers to this scale yielded two major factors that accounted for 29% of the total variance. The first factor Gibson and Dembo believed to represent personal efficacy, corresponding to Bandura's efficacy expectations. The nine items that loaded most heavily on this factor were considered to reflect teacher's sense of personal responsibility for student learning and/or behavior. The second factor was believed to represent teaching efficacy. Seven items loaded most heavily on this factor and were seen as representing teacher's beliefs about the general relationship between teaching and learning, similar to Bandura's outcome expectancy dimension.

In a later investigation, Woolfolk and Hoy (1990) used a revised version of the Teacher Efficacy Scale to measure perceived efficacy in 182 prospective teachers enrolled in the teacher education program at a large state university. Because Gibson and Dembo (1984) found that acceptable reliability coefficients resulted from only 16 of the original 30 items in their scale, Woolfolk and Hoy reported they used those 16 items, plus four

others that referred to the adequacy of the teacher's preservice preparation, an area deemed relevant for their sample. In addition, Woolfolk and Hoy included the two original Rand items, bringing the total number of items in their scale to 22.

Using factor analytic techniques with varimax rotation, Woolfolk and Hoy (1990) attained results closely matched to those of Gibson and Dembo (1984). Two factors emerged, corresponding to the personal efficacy and teaching efficacy dimensions, that accounted for 27% of the total variance in scores. The two Rand items loaded on the factors predicted by Gibson and Dembo, and the loadings of other items were comparable (See Table 1).

Despite consistency in the results of these two studies, close inspection of the items that comprise the identified factors reveals an interesting anomaly. Although the items that load on the personal efficacy factor all use the referent "I," all are also positive and have an internal locus (i.e., "I can"). Those items that load on the teaching efficacy factor use the referent "teachers," but also are negative and have an external locus (i.e., "teachers cannot"). Thus, the distinction between these two factors may be confounded. It is unclear whether the true difference is between personal versus teaching efficacy dimensions, as suggested by Gibson and Dembo (1984) and Woolfolk and Hoy (1990), or whether it is between simpler internal versus external locus dimensions. This distinction is illustrated in Figure 1.

Insert Figure 1

The primary purpose of this study was to examine this difference and, in doing so, to bring clarity to our interpretation of teacher efficacy measures. Specifically, we hoped to broaden our understanding of this important construct and improve our means of measuring it by unraveling the factors that determine its structure.

Method

Subjects

A total of 342 subjects were involved in this investigation: 283 experienced classroom teachers and 59 preservice teachers. The experienced teachers represented the entire teaching staffs of three medium size suburban/rural school districts in two different states. One hundred eighty-seven were women and 96 were men. These teachers taught in grades K-12 and had an average of 10.4 years teaching experience. The 59 preservice teachers (44 women and 15 men) were enrolled in the teacher preparation program at a large state university in the West. All were in their junior or senior year, and had completed several teaching practicums.

Procedure

Teacher efficacy was measured in this study using an altered form of the Teacher Efficacy Scale (Gibson & Dembo, 1984). We began with the 16 items that yielded significant factor loadings in Gibson and Dembo's

(1984) original study, 15 of which were employed in Woolfolk and Hoy's (1990) extended study. To these we added the three additional items that Woolfolk and Hoy had found to yield significant factor loadings. Of these 19 items, 11 had been found to load principally on the personal efficacy dimension and eight on the teaching efficacy dimension. Table 1 shows each of these items, their item number in the respective scale, and their factor loading from both the Gibson and Dembo (1984) and Woolfolk and Hoy (1990) studies.

Insert Table 1

Items were then altered in the following way: Six of the 11 personal efficacy items, all of which reflected a personal-internal orientation (P-I), were randomly selected and reworded to reflect either a teaching-internal (T-I) or a personal-external (P-E) orientation. For example, the P-I item "When a student does better than usually, many times it is because I exert a little extra effort," was altered to read, "When a student does better than usually, many times it is because *the teacher* exerts a little extra effort," making it a T-I item. In a like manner, four of the eight teaching efficacy items, all of which reflected a teaching-external orientation (T-E), were randomly selected and reworded to reflect either a personal-external (P-E) or a teaching-internal (T-I) orientation. The T-E item, "A teacher is very limited in what he/she can achieve because a student's home environment is a large influence on his/her achievement," for example, was altered to read, "*I am* very limited in what *I* can achieve because a student's home environment is a large influence on his/her achievement," becoming a P-E item. The procedure used to reword items to express any one of these four orientations is illustrated in Table 2.

Insert Table 2

The altered and unaltered items were then reassembled and numbered exactly as they were in the Woolfolk and Hoy (1990) study. Also included in the scale were the two unaltered Rand items (Berman & McLaughlin, 1977). The result was a teacher efficacy scale consisting of 21 items: five P-I items, five P-E items, five T-I items, and six T-E items. Responses to each item were made along a 6-point Likert scale from "strongly agree" to "strongly disagree."

The altered teacher efficacy scale was administered to the experienced teachers at the beginning of a district-wide staff development meeting. Together with the demographic information that was requested, most subjects were able to complete the form in 10-15 minutes. Ninety-two percent of the returned forms were usable. The preservice teachers were administered the scale at the beginning of one of their regularly scheduled class meetings, and 95% of these returned forms were usable. Subjects were told the results were for research purposes only. They also were assured of anonymity in their responses and guaranteed that results would be reported in summary form only.

Results

Comparisons of Subsamples

Our first step in the analysis was to check for inconsistencies in item responses on the altered teacher efficacy scale across the four subsamples of teachers. We found the mean item responses of experienced teachers from the three different school districts all to be quite similar. The prospective teachers offered responses that were somewhat more efficacious than those of the experienced teachers, but none of these differences was statistically significant. Item means and standard deviations for experienced and prospective teachers are shown in Table 3.

Insert Table 3

The lack of difference in the responses of experienced and prospective teachers is consistent with what Woolfolk and Hoy (1990) discovered in comparing their results, obtained from a sample of preservice teachers, with those of Gibson and Dembo (1984), who gathered their data from experienced elementary teachers (see Table 1). Because of the lack of any significant difference among the subsamples of teachers from whom data was gathered, as well as the lack of differences noted in previous investigations, the decision was made to combine all subjects in further analyses.

Factor Analysis

Because the purpose of our study was not to identify a set of unknown factors, but rather to verify a factor structure based on a the findings of previous research, we analyzed our data using principal components factor analysis to generate a two-factor solution (Kim & Mueller, 1978). Subjects' responses to the altered teacher efficacy scale were thus submitted to factor analytic procedures using generalized least squares estimates. Orthogonal rotation to a simple structure was accomplished through the varimax method with Kaiser normalization, which attempts to minimize the number of variables that have high loadings on a factor (Norusis, 1985). The varimax rotation converged in three interations, yielding a two-factor model that accounted for 32% of the total variance in item responses. These two factors had eigenvalues of 4.43 and 2.30, respectively, and were only modestly correlated ($r = .237$). Item classifications, communalities, and factor loadings are shown in Table 4.

Insert Table 4

Inspection of factor loadings in comparison with item classifications showed the 11 items that were negative and external in their orientation all loaded primarily on factor 1. This was true of both personal (P-E) and teaching (T-E) efficacy items. Nine of these items had factor loadings of .40 or greater. The ten positive and internally oriented items all loaded primarily on factor 2, nine having factor weights of .40 or greater. Again, no distinction between personal (P-I)

and teaching (T-I) efficacy items was evident. Factor weights were of similar magnitude to those found in the Gibson & Dembo (1984) and Woolfolk & Hoy (1990) studies. The reverse in loading sign between factors 1 and 2 is due to the difference in scale direction. The more efficacious responses are low scores for the externally oriented items loading on factor 1, but high scores for the internally oriented items loading on factor 2.

Table 5 lists the items as they appeared in our revised teacher efficacy scale, in order of their factor loadings. Here, again, there is no evidence to suggest a personal versus teaching efficacy distinction. The loading order of personal and teaching oriented items on each factor appears to be random.

Insert Table 5

Discussion

The results from our study add further support to the idea that teacher efficacy is a multidimensional construct. Consistent with the earlier research of Ashton & Webb (1986), Gibson & Dembo (1984), and Woolfolk & Hoy (1990), our analysis confirmed two independent efficacy dimensions. But contrary to these earlier studies, we could find no evidence to indicate the distinction between these two dimensions relates to a personal efficacy versus teaching efficacy difference. Instead, our results indicate the difference to be an internal versus external distinction, similar to the locus-of-control distinction found in measures of causal attribution (Weiner, 1974, 1979). The teachers we surveyed, both prospective and experienced, did not distinguish between their personal ability to affect students and the potential influence of teachers in general. The distinctions they drew related principally to their beliefs about whether or not teachers, including themselves, can influence how well students learn, even those who may be difficult or unmotivated.

It is important to note, however, that while similar to the internal versus external locus-of-control dimension of attribution theory, the distinction identified here is contextually different. According to attribution theory, internal and external are opposite poles in a bipolar, locus-of-control continuum (Weiner, 1974). The more one attributes cause to internal factors, the less that is attributed to external elements. If such an internal versus external distinction also were true of teacher efficacy, all of the items in our scale would have loaded on a single factor and would have differed principally in the sign of their factor weight. But this was not the case. Instead, we found two distinct factors that were only modestly interrelated.

The internal versus external distinction identified in this study more accurately represents teachers' perceptions of the strength of different and independent factors. The internal factor appears to represent perceptions of *personal* influence, power, and impact in teaching and learning situations. Because of the nature of the items in the

current scale, these perceptions reflect a perspective that is positive and optimistic. The external factor, on the other hand, relates to perceptions of the influence, power, and impact of elements that lie *outside the classroom* and, hence, may be beyond the direct control of individual teachers. These elements might include, for example, the particular social, demographic, or economic conditions that affect students' lives. While external elements such as these sometimes can have a positive effect on student learning (e.g., a supportive home environment), the items in the current scale tend to emphasize their negative impact.

Our evidence indicates that although perceptions of the influence of these two factors are somewhat related, they appear to operate independently. In other words, teachers' perceptions of their *personal* influence on student learning are not solely based on, nor strongly related to, their perceptions of the influence of *external environmental conditions*. Some teachers may believe, for example, that even though the effects of social, demographic, and economic conditions are strong, they still can have a powerful influence on students. At the same time, other teachers may believe that their ability to affect students is very limited, regardless of the social, demographic, or economic conditions that impinge on their classrooms and the lives of their students.

We hasten to add that our findings are not necessarily new. As indicated earlier, close inspection of the items used to measure teacher efficacy in the research of both Gibson and Dembo (1984) and Woolfolk and Hoy (1990) reveals that they, too, identified this same distinction. The items that loaded on the first factor in both studies were internally oriented while those that loaded on the second factor had an external orientation. Unfortunately, the personal versus teaching distinction emphasized by these researcher masked this internal versus external distinction and, as a consequence, confounded their interpretations of results.

It also is important to note that other recent studies provide further evidence in support of an internal versus external distinction. Midgley, Feldlaufer, and Eccles (1989), for example, restricted their measure of teacher efficacy to the personal dimension, but found teachers could be differentiated based on their sense of optimism (internal) or futility (external) in affecting student achievement.

We are uncertain as to why the personal versus teaching efficacy distinction does not hold. One possible explanation is that the direct extension of Bandura's notion of outcome and efficacy expectations to teaching and personal efficacy dimensions is invalid, or at least inexact. As Woolfolk and Hoy (1990) note:

> For Bandura, an outcome expectation is a judgment of the likely consequences of an action, whereas an efficacy expectation is a judgment about ability to perform an action. The question of whether teachers can override the effects of adverse background influences (Rand Item 1) is an efficacy expectation, not an outcome expectation, because it involves the potential to perform. In this case, the efficacy

> expectation has to do with beliefs about teachers in general, not oneself as a teacher. The outcomes associated with this performance might include a vast range of consequences, from changes in student attitudes and lower drop-out rates to recognition and rewards for the teachers involved. Thus, the question of whether teaching can overcome the influence of student background is not an outcome expectation as described by Bandura. (p. 82).

Hence, while Bandura's (1986) ideas about outcome and efficacy expectations may be helpful in interpreting causal attributions in many contexts, their direct extension to defining the dimensions of teacher efficacy appears inaccurate.

Another possible explanation relates to how teacher efficacy is conceptualized in this instrument. Stein and Wang (1988) point out, for example, that efficacy can be conceptualized and measured in either global or specific terms. The trend in the social-psychological literature is to define self-efficacy in more goal-specific terms. That is, it is an individual's judgment of his or her ability to do a particular task (Lefcourt, 1982). The work of Ashton and Webb (1982, 1986), upon which Gibson and Dembo (1984) built their instrument, supports a goal-specific conceptualization of teachers' sense of self-efficacy. Perhaps in an instrument that assessed a more global conceptualization of teacher efficacy, Bandura's notion of outcome and efficacy expectations would prove more fitting.

We believe it is also important to note that our study focused primarily on the question, "What do teacher efficacy scales actually measure?" The potentially more important question, "What is teacher efficacy?" was not directly addressed. Hence, while our findings show that today's most widely accepted scales of teacher efficacy may be measuring internality versus externality, this does not necessarily mean that teacher efficacy is the same thing. Additional studies that explore in detail the precise nature of the teacher efficacy construct, based on well defined conceptualizations of teacher efficacy, are needed.

In that regard, our results show that it is critically important to understand not only how the construct of teacher efficacy is measured, but also how such measures are interpreted. This investigation was narrowly focused in that it sought only to confirm the validity of a two-factor model of teacher efficacy. Other studies, however, have shown that additional factors also may be meaningful. Guskey (1982, 1988), for example, presents evidence to show that teachers' sense of personal efficacy can be divided into separate dimensions of responsibility for positive student learning outcomes and responsibility for negative outcomes. In an extended analysis of their data, Woolfolk and Hoy (1990, p. 86) verified this same distinction. Other evidence suggests that teachers' judgments about the ability level of students is an important mediating variable in perceptions of efficacy (Medway, 1979). A study by Cooper, Burger, and Seymour (1979), for instance, found that teachers felt they had less control over low-ability students and, as a result, were less able to influence how well they learned. Still other evidence indicates that whether items refer to influence on a single student, or to

influence on groups of students, can lead to different efficacy perceptions (Guskey, 1987).

Factors such as these should be considered as we proceed in efforts to develop more sophisticated measures of teacher efficacy and as we interpret their results. We also should take care in delineating results that we consider a variety of explanations, complex and simple. If this is done, not only will the meaning we attach to measures of teacher efficacy be clarified, but the role of this construct in efforts to improve the teaching and learning process will be better understood.

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Table 1

Item Numbers and Factor Loadings from the Teacher Efficacy Scale used by Gibson & Dembo (1984) and Woolfolk & Hoy (1990)

Item No. G&D	Item No. W&H	Item	Loading G&D	Loading W&H
		Items loading on Factor 1		
15	8	When I really try, I can get through to most difficult students.	.53	.59
24	14	If a student did not remember information I gave in a previous lesson, I would know how to increase his/her retention in the next lesson.	.51	.59
14	7	When a student gets a better grade than he/she usually gets, it is usually because I found better ways of teaching that student.	.46	.59
25	16	If a student in my class becomes disruptive and noisy, I feel assured that I know some techniques to redirect him/her quickly.	.49	.57
*	19	If I really try hard, I can get through to even the most difficult or unmotivated students.		.56
29	18	If one of my students couldn't do a class assignment, I would be able to accurately assess whether the assignment was at the correct level of difficulty.	.48	.54
12	6	When a student is having difficulty with an assignment, I am usually able to adjust it to his/her level.	.46	.54
19	11	When the grades of my students improve, it is usually because I found more effective teaching approaches.	.55	.53
	22	My teacher training program and/or experience has given me the necessary skills to be an effective teacher.		.51
	5	I have enough training to deal with almost any learning problem.		.47
21	12	If a student masters a new concept quickly, this might be because I knew the necessary steps in teaching that concept.	.61	.46
1	1	When a student does better than usually, many times it is because I exert a little extra effort.	.49	.39

Items loading on Factor 2:

16	9	A teacher is very limited in what he/she can achieve because a student's home environment is a large influence on his/her achievement.	.65	.70
*	20	When it comes right down to it, a teacher really can't do much because most of a student's motivation and performance depends on his/her home environment.		.63
6	4	If students aren't disciplined at home, they aren't likely to accept any discipline.	.60	.58
4	3	The amount a student can learn is primarily related to family background.	.54	.55
23	13	If parent would do more for their children, I could do more.	.52	.47
2	2	The hours in my class have little influence on students compared to the influence of their home environment.	.54	.47
	10	Teachers are not a very powerful influence on student achievement when all factors are considered.		.37
30	17	Even a teacher with good teaching abilities may not reach many students.	.45	.35
27		The influences of a student's home experiences can be overcome by good teaching.	-.52	

* Items originally from Berman & McLaughlin (1977).

Table 2

Example of Alternative Forms of an Item

Item: Gibson & Dembo (1984) No. 15, and Woolfolk & Hoy (1990) No. 8

Personal-Internal (P-I):
(Original Item)

When I really try, I can get through to most difficult students.

Personal-External (P-E):

Even when I really try, it is hard to get through to the difficult students.

Teaching-Internal (T-I):

When teachers really try, they can get through to most difficult students.

Teaching-External (T-E):

Even when they really try, it is hard for teachers to get through to the difficult students.

Table 3

Item Means and Standard Deviations for Experienced and Preservice Teachers in the Sample

Item No.	Experienced (n = 283)		Preservice (n = 59)	
	Mean	(SD)	Mean	(SD)
1	2.19	(.86)	2.35	(1.06)
2	3.88	(1.49)	4.30	(1.35)
3	4.02	(1.48)	4.46	(1.33)
4	3.47	(1.62)	4.03	(1.37)
5	3.77	(1.54)	3.88	(1.74)
6	4.89	(1.16)	5.15	(1.01)
7	2.55	(1.00)	2.45	(.99)
8	2.13	(1.01)	1.88	(.95)
9	3.99	(1.32)	4.45	(1.31)
10	5.20	(1.01)	5.38	(.87)
11	2.46	(.98)	2.13	(.97)
12	2.30	(.95)	2.29	(1.12)
13	1.94	(1.04)	2.44	(1.29)
14	2.61	(1.05)	2.55	(1.14)
15	3.15	(1.26)	2.86	(1.28)
16	1.86	(.94)	1.83	(.96)
17	3.35	(1.66)	3.78	(1.70)
18	2.42	(1.18)	2.62	(1.42)
19	2.32	(1.01)	2.14	(1.02)
20	4.51	(1.26)	4.87	(1.20)
21	4.27	(1.55)	4.28	(1.68)

Table 4

Factor Item Loadings for the Teacher Efficacy Scale: Principal Components Factor Analysis Varimax Solutions

Item No.	Classification	Communality	Factor 1	Factor 2
1	T-I	.299	-.030	**.546**
2	P-E	.349	**.563**	-.180
3	T-E	.340	**.572**	.114
4	T-E	.379	**.610**	.082
5	P-E	.227	**.448**	-.163
6	P-E	.190	**.421**	-.114
7	P-I	.361	-.017	**.601**
8	P-I	.396	-.333	**.534**
9	P-E	.606	**.778**	-.010
10	T-E	.507	**.664**	-.259
11	T-I	.541	-.226	**.700**
12	T-I	.384	.020	**.619**
13	T-E	.149	**.411**	.168
14	P-I	.353	-.047	**.592**
15	P-I	.244	-.254	**.423**
16	P-I	.212	-.133	**.441**
17	T-E	.121	**.344**	-.053
18	T-I	.121	.056	**.343**
19	T-I	.382	-.359	**.503**
20	T-E	.488	**.682**	-.152
21	P-E	.084	**.289**	-.027

Table 5

Factor Item Loadings for the Teacher Efficacy Scale

Item No.	Item	Loading
	Items loading on Factor 1 -- External	
9	*I am* very limited in what *I* can achieve because a student's home environment is a large influence on his/her achievement.	.778
* 20	When it comes right down to it, a teacher really can't do much because most of a student's motivation and performance depends on his/her home environment.	.682
10	Teachers are not a very powerful influence on student achievement when all factors are considered.	.664
4	If students aren't disciplined at home, they aren't likely to accept any discipline.	.610
3	The amount a student can learn is primarily related to family background.	.572
2	The hours in my class have little influence on students compared to the influence of their home environment.	.563
5	I have *not been* trained to deal with *many of the* learning problems *my students have*.	.448
6	When a student is having difficulty with an assignment, I *often have trouble* adjusting it to his/her level.	.421
13	If parent would do more for their children, *teachers* could do more.	.411
17	Even a teacher with good teaching abilities may not reach many students.	.344
21	My teacher training program and/or experience *did not give* me the necessary skills to be an effective teacher.	.289

Items loading on Factor 2 -- Internal

11	When the grades of students improve, it is usually because *their teachers* found more effective teaching approaches.	.700
12	If a student masters a new concept quickly, this might be because *the teacher* knew the necessary steps in teaching that concept.	.619
7	When a student gets a better grade than he/she usually gets, it is usually because I found better ways of teaching that student.	.601
14	If a student did not remember information I gave in a previous lesson, I would know how to increase his/her retention in the next lesson.	.592
1	When a student does better than usually, many times it is because *the teacher* exerts a little extra effort.	.546
8	When I really try, I can get through to most difficult students.	.534
* 19	If I really try hard, I can get through to even the most difficult or unmotivated students.	.503
16	If a student in my class becomes disruptive and noisy, I feel assured that I know some techniques to redirect him/her quickly.	.441
15	The influences of a student's home experiences can be overcome by good teaching.	.423
18	If a student couldn't do a class assignment, *most teachers* would be able to accurately assess whether the assignment was at the correct level of difficulty.	.343

* Items originally from Berman & McLaughlin (1977).

Note: *Italics* represent item alterations from the form used in Gibson & Dembo (1984) and Woolfolk & Hoy (1990).

Figure 1

Efficacy Construct Dimensions

		LOCUS	
		Internal (Positive)	External (Negative)
EFFICACY	Personal	I can (P-I)	I cannot (P-E)
	Teaching	Teachers Can (T-I)	Teachers Cannot (T-E)